California Alert and Warning Initiative Implementation Plan

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1 Introduction

Government Code Section 8593.6 (Assembly Bill 2231, Pavley) required the California Emergency Management Agency (Cal EMA)[1] convene a Working Group "to develop policies and procedures that will provide a framework for instituting a public-private partnership with providers of mass communications systems to enhance public access to emergency alerts." The Alert and Warning Working Group (AWWG) was also to provide advice to the Cal EMA Secretary on development of policies and procedures that "will lay the framework for an improved warning system for the public".

The composition of the AWWG emphasized the public-private partnership nature of the alert and warning process. Representatives of many aspects of the communications industry, state and local government, and access and functional needs populations actively participated in the AWWG. The AWWG met throughout 2008 to review the "state of the state" with regard to alert and warning messaging, technology, protocols, and identify related issues. Much of the work was conducted through subcommittees ("work teams") addressing four key areas: (1) Technical Issues, (2) Social Issues, (3) Standardization, and (4) Funding, Legal, and Liability Issues. This effort resulted in development of a Report that addressed current trends in alert and warning, including significant national initiatives in the process of being implemented, identified associated issues in California, and made a series of recommendations for development, maintenance, and operation of an integrated Alert and Warning system in California. This effort culminated in the Alert and Warning Report to the California Legislature[2] (Report).

The Report evaluated the current alert and warning system in California, which includes the National Warning System (NAWAS) and the California Warning System (CALWAS), the Emergency Alert System (EAS), and the Emergency Digital Information Service (EDIS). It also addressed how these systems may link with current and pending national initiatives, such as Common Alerting Protocol (CAP), Commercial Mobile Alert System (CMAS), and the Integrated Public Alert and Warning System (IPAWS). Accessibility of alert and warning systems for persons with functional needs was also addressed and recommendations were made regarding ongoing development, maintenance, and governance of the system.

2 Purpose and Scope

This Plan outlines a process to begin to implement the recommendations made in the Report. Together, the Report and this Plan will initiate a roadmap to address improvements to the alert and

[1] The Bill and Code Section reference the Office of Emergency Services and its Director, but for this Plan it is updated to Cal EMA

[2] Alert and Warning Report to the California State Legislature: Fulfilling the Requirements of AB 2231 (Pavley) Section 5393.6 of the Government Code, 2008

warning system for California. Overall, these two documents taken together reflect a comprehensive review of California's public alert and warning system and identify steps necessary to improve and maintain the system. It may also be used to leverage appropriate grant opportunities to further the system.

The Plan was developed through inputs and recommendations captured by a focus group made up of the statutory members of the AWWG, as identified in the initiating legislation, along with other interested parties from the 2008 meetings. Since its completion in December, 2009, the plan is being submitted to the Administration and then to the Legislature along with the Report.

3 Proposed Initiative Deliverables

Based on a review of the Report, Cal EMA staff identified 14 proposed deliverables. Based on subsequent interviews with staff, two of the originally proposed deliverables seemed to have significant overlap and were combined, so there are now 13 proposed deliverables identified in the Plan. The deliverables address most, but not all of the 33 recommendations contained in the Report, focusing on those that need to occur first within the sequence of activities associated with the alert and warning initiative. (Generally, those that are not addressed in the deliverables now would be work products of stakeholder activity addressed under deliverable 3.4.) A cross walk to recommendations in Report to Legislature is contained in Attachment 1.

Overarching Issues

Several overarching issues have been identified that are critical to the sequencing and development of deliverables identified in the Report Implementation Plan. These include:

- Agreement on the future of the Emergency Digital Information Service (EDIS), specifically determination of what roles it will play (alert system, information source, etc). Desired content and functions should drive technology, not the reverse.
- A group should be convened to formalize stakeholder input into the development of the alert and warning system and to assist with development of specific deliverables.
- Progress on or completion of several deliverables is dependent on actions by Federal agencies or others not under the direct control of Cal EMA. The State should actively engage with these Federal agencies to make California's needs and preferences known.

3.1 Common Alerting Protocol

3.1.1 Description of Proposed Deliverables

As noted in the Report, the objective of the Common Alerting Protocol (CAP) is to define "a single message format with the essential features to handle existing and emerging alert systems and sensor technologies." There has been general worldwide consensus on the elements of CAP since 2004-2005. California's Emergency Digital Information Service (EDIS) is compliant with CAP as defined by the Organization for the Advancement of Structured Information Standards (OASIS).

Deliverables: Implementation of Common Alerting Protocol (CAP)

a. Cal EMA will send a letter to FEMA stating that California has adopted CAP as defined by OASIS as a structural basis of the state's Alert and Warning System and encouraging

FEMA to do likewise in a timely manner. Once sent to FEMA, publicize the endorsement by posting the letter on the Cal EMA website.

b. Develop methodology for certifying CAP compliance.
c. Gather OASIS CAP certification – contact OASIS to discuss the possibility of working together.

3.1.2 Current Status

Although CAP has been an accepted and internationally endorsed standard for five years, it has yet to be formally "adopted" by the Federal Emergency Management Agency (FEMA) as the standard for a national alert and warning system[3]. Cal EMA management has met with FEMA alert and warning program management and informed them that California has embraced CAP and will be formally adopting it as a foundational element of California's alert and warning system. It is anticipated that FEMA will formally adopt CAP during federal fiscal year 2010[4]. As mentioned above, EDIS is complaint with CAP as defined by OASIS.

The broadcast industry has embraced CAP and supports California's endorsement. However, as a national medium, the industry still looks at national adoption of the standard as essential.

3.1.3 Planned Actions

Cal EMA will formally inform FEMA, via letter, that California has successfully incorporated CAP, as defined by OASIS, as a structural basis of the state's Alert and Warning System and will formally adopt it as an essential system component. It will also encourage FEMA to act quickly to adopt CAP, as defined by OASIS, as the national standard. The letter will be publicized in order to emphasize California's on-going leadership in the alert and warning arena and as a means of encouraging others to publically embrace CAP. It is important that this communication to FEMA be done quickly, as it is to California's benefit that CAP be adopted as currently defined.

Until FEMA formally adopts CAP, California cannot definitively say if the components of its alert and warning system, most notably EDIS, are complaint with the national standard. When FEMA adopts CAP, it will likely identify how individual components of the national alert and warning system, including state and local components of the "system of systems", can demonstrate they are compliant with CAP, including any available certification process. It will be important that California be represented in any discussions or work groups that will be crafting compliance and certification processes in order to make sure that the processes are not overly burdensome for state, local, and other California alert and warning partners.

[3] See Section 3.12, below, for a description of the Integrated Public Alert and Warning System (IPAWS), the national effort to update and integrate the nation's alert and warning systems.

[4] As noted in Government Accountability Office report Improved Planning and Coordination Necessary for Modernization and Integration of Public Alert and Warning System, September 2009

3.2 New Emergency Digital Information System

3.2.1 Description of Proposed Deliverable

In the Report, the AWWG highlights the role of the Emergency Digital Information System: "California's Emergency Digital Information Service (EDIS) should serve as the backbone for the Statewide Alert and Warning System....In order for EDIS to provide this pivotal role, (1) emergency managers must be able to count on it being there (reliability) and being supported; (2) technology must be kept up-to-date; (3) emergency managers, broadcasters, and other partners must know how to access and effectively use it; and (4) the system must be maintained." EDIS enables authorized agencies to deliver emergency public information and advisories directly to the news media and the public. The AWWG recommended Cal EMA "be given the responsibility and budgetary support necessary to maintain and manage EDIS, including necessary upgrades to maintain consistency with emerging federal alert and warning initiatives."

Deliverables: Implementation of new Emergency Digital Information System (EDIS)

a. Define "new" EDIS. Establish a working group of key stakeholders to identify the "essential elements" that must be incorporated in the "new" EDIS.
b. Develop timeline for implementation.
c. Ensure integration into Commercial Mobile Alert System (CMAS).
d. Identify a dedicated funding source for EDIS.
e. Develop standards for usage.
f. Conduct outreach to local OES managers, broadcasters, other EDIS users, and the public on EDIS and its capabilities.

3.2.2 Current Status

EDIS is comprised of two parts: the message or information to be imparted to the target audience and the technology for delivering the message. It is generally agreed that the "what" of the message should drive the "how" of the alert and warning technology rather than the reverse. Cal EMA, in concert with other system users, needs to reach agreement on how EDIS will be used in the future. After the "what" is defined the most efficient "how" can be identified.

EDIS is a very critical piece of California's public alert and warning system. The current EDIS structure is simple to use but is a powerful tool; these attributes must be maintained in the "new" EDIS. EDIS is used to notify first responders and broadcasters of important information that may not meet the criteria for activation of the Emergency Alert System (EAS) as well as critical information that does meet that criteria. In this regard, EDIS provides a level of redundancy that allows critical information to reach all broadcasters in the unlikely event of loss of the primary and alternate EAS stations during an emergency.

Currently, a limited number of state and federal emergency management agencies are actively using EDIS to transmit emergency information, including the California Highway Patrol (for AMBER alerts) and Cal EMA (critical weather watches and warnings, tsunami alerts, and regular system tests). Several local governments, including Contra Costa County, San Luis

Obispo County, and Los Angeles County, rely on EDIS as the framework for their local alerting systems.

Cal EMA recognizes, however, that EDIS, with some modifications, could be used to rapidly impart emergency information to a larger audience than currently receive EDIS messages. It hopes to open the system to a greater number of platforms by transmitting it as an RSS feed, as well as currently available formats, such as email and Emergency Alert System (EAS) broadcast feeds. Some delivery mechanisms have built-in limitations on message length, such as Twitter (140 characters) and CMAS (90 characters). However, there is also a desire to be able to use the EDIS to provide more detailed information services, such as transmitting pictures, maps, detailed evacuation instructions, and news releases, which require more than these character limitations.

Although the current EDIS has many strong features (e.g., it is CAP compliant, has direct linkages to broadcasters configured with compatible equipment, etc.), it is based on proprietary software and requires considerable staff time to support. To maximize usability, EDIS must be a user-friendly system that can be easily maintained and modified to meet evolving alert and warning technology and applications. With national standardization of key alerting system components such as CAP (see 3.1) and IPAWS (see 3.13), Cal EMA will explore products offered by other vendors to determine if essential EDIS elements can be provided in a more cost-effective, less staff intensive, open architecture environment. In this process, the key elements of and the simplicity of the current EDIS must be maintained. Cal EMA should bring together key EDIS stakeholders (broadcasters, local government, National Weather Service, etc.) to identify the "essential elements of EDIS" and to make sure the system continues to work for all sizes and types of users.

In the interim, Cal EMA has entered in to a contract to maintain EDIS; the contract extends through mid calendar year 2010 and will be extended after that if a new system has not been identified by then. Realistically, Cal EMA staff believe it make take up to 18 months to define the "what" and "how" of the "new" EDIS.

As note in the Report, maintenance and sustainment of EDIS does not have a dedicated funding source within the State Budget. Cal EMA is currently exploring available grant funding to support the updates and improvements noted above. As of October 2009 an appropriate grant funding source has not been identified.

3.2.3 Planned Actions

Cal EMA will continue to engage with key EDIS users, both current and potential system users, and stakeholders – including state agencies (including CHP, Chief Technology Officer's Public Safety Communications Division,), local government warning and emergency managers, and federal agency partners (including NWS, West Coast Alaska Tsunami Center and FEMA) – to define how EDIS can best be used as both an alert and warning and an information tool. As mentioned above, this is anticipated to take approximately 18 months (mid-2011) to complete. This is generally consistent with the likely timeline for full implementation of IPAWS and CMAS. Once the system is defined, Cal EMA can begin to investigate potential system vendors.

If additional funding is needed for EDIS, the first decision must be if this needs to be an on-going dedicated funding source (i.e., part of the base budget) or if it is funding for a sustainment plan, requiring periodic funding for regular upgrades (such as with computer software). If base funding is needed, this would require a Budget Change Proposal, including an identification of funding source. Options could be General Fund, grant funds, or another special fund source (such as the telephone surcharge used to fund 9-1-1 service statewide). Of the currently available federal Department of Homeland Security grants, it is likely that only the Emergency Management Performance Grant may be applicable to a long-term project such as maintenance of EDIS and other activities of the State's Alert and Warning System, such as training and support of work groups or an advisory board. In the event that any of these funding sources become available, it would be valuable if a draft Budget Change Proposal or grant justification was developed in order to quickly take advantage of a potential funding opportunity.

3.3 Alert and Warning System in the State Emergency Plan

3.3.1 Description of Proposed Deliverable

At the time the AWWG was meeting and the Report was being developed, the State Emergency Plan (SEP) contained very little information on the State's alert and warning system. The Report recommended that the system be explained in the SEP when it was revised.

Deliverable: Explain alert and warning system in the State Emergency Plan.

3.3.2 Current Status

The SEP has been revised since the Work Group prepared the Report to the Legislature. The newly promulgated (June 2009) SEP has a description of the current California Alert, Warning and Notification system. (See particularly SEP Section 10.3 [pages 46-48].) Unlike the earlier version of the SEP, the 2009 SEP identifies the lead state agency for issuing alerts and warnings, describes the systems used, and includes a reference to use of EDIS by some government agencies to relay alerts and warnings.

3.3.3 Planned Actions

If there are changes in day-to-day and emergency operation of California's alert and warning system as a result of implementation the Report's recommendations, the impact of these changes on the California Alert, Warning, and Notification system description in the SEP will be included in the next regular review of the SEP. Specific mention of the use of the Joint Information System for follow-up on multi-jurisdictional warnings may be considered. Any identified changes will be included in the next revision of the SEP.

In the next revision of the SEP, consideration should be given to adding a clear statement that local governments have the authority issue warnings for their community. In addition, local jurisdictions should be encouraged to outline their local alert and warning system in their local Emergency Plan.

3.4 California Public/Private Partnership for Alert and Warning

3.4.1 Description of Proposed Deliverable

In the Report, the AWWG expressed a strong desire to formalize stakeholder input into the ongoing development of the State's Alert and Warning system. It recommended "that the California Public/Private Partnership for Alert and Warning (Partnership) be created as the basis of a formal governance structure for the Statewide Alert and Warning System and have a formal charter established (including goals, objectives, timelines, etc.)". It further stated that it "should include representatives of fixed and mobile service and device providers, local and state agencies, diverse disability groups, non-English speakers, academics, third-party emergency alert and telephone notification vendors, and other key players".

Deliverable: Maintain Stakeholder Involvement in California's Alert & Warning System.

a. Convene an Alert and Warning System Users Group to provide overall system governance.
b. Provide for industry and public input on the alert and warning system through periodic public meetings of the Users Group.

3.4.2 Current Status

It is recognized that there is a need to continue to involve all critical partners in development of the alert and warning system and to keep the discussion begun during the AWWG activities going. The current process for developing this Implementation Plan continues the process of stakeholder input through use of a focus group and the holding of a public meeting. The State Emergency Communications Committee (SECC) and the counterpart Local Emergency Communications Committees currently exist to provide guidance and coordination on the operation of the EAS. Cal EMA has met with the members of the SECC to discuss the "next steps" for implementing the Report and this Plan.

As noted in the Report, most warnings are issued by local government. Thus, it is important that local system users play a strong role in system governance and that the governance system not just address state level components (such as EDIS maintenance) but also development and maintenance of local system components. It is also critical that the governance system facilitate integration with other systems, such as NOAA Weather Radio.

It was mentioned in interviews with Cal EMA staff that "public/private partnership", as it is used in other contexts within the agency, generally involves agreements to provide mutual assistance during emergency operations and not the formal "governance" that was envisioned in the Report. Examples of governance structures for other state/local systems, such as for communication system interoperability (the California Statewide Interoperability Executive Committee [Cal SIEC]) or for peace officer training (the Peace Officer Safety and Training [POST] Commission), were suggested as alternative governance models. Local emergency management (including warning/dispatch center) personnel, broadcasters, and state and federal agencies with alert and warning responsibilities were identified as the most critical members an ongoing group to assist Cal EMA in development of the alert and warning system. The

statutory members of the AWWG, as outlined in Government Code Section 8593.6, could also be the nucleus of an ongoing advisory group.

As an alternative, it was suggested that California look to the model of the non-profit Partnership for Public Warning (PPW) as a method for provide overall guidance and input to the alert and warning system. PPW was convened by concerned representatives of government, broadcasters, and other warning stakeholders shortly after September 11, 2001 as a voluntary forum to further common strategies supporting alert and warning activities. Such an independent entity could provide some "daylight" between overall system management and individual agency operations.

3.4.3 Planned Actions

After completion and approval of the Implementation Plan, Cal EMA should create a group to advise the Secretary on the development of the alert and warning system and identify and address alert and warning issues of common concern. The group should be composed of system users, primarily local representatives, state agencies, disability community representatives, and broadcasters. The group could provide input on EDIS (see 3.2). It could also provide members to participate in working groups to tackle other Report recommendations, such as development message templates, standards of practice, system evaluation tools, and procedures and protocols.

Other interested parties -- such as landline and cellular telephone companies, internet providers, and satellite and cable television companies – and regulators, as well as the interested public, could continue to participate through periodic forums or workshops with the advisory group members and, as appropriate, by participating on specific work group efforts.

The A/W advisory group will also manage its work through agreed upon consensus-seeking mechanisms and will document the systems through development of an organizational charter and other tools.

3.5 Templates for Common Warning Situations

3.5.1 Description of Proposed Deliverable

The Report notes that "templates should be developed for common warning situations. Different templates may be needed for different devices… Messages should include identification of a source for additional information and there should be a clear differentiation between warning messages, follow-up information, and general public education." The Report notes that alert message recipients will seek corroboration of the information contained in the message. Alert and follow-up templates should be developed in parallel.

Deliverables: Develop alert and warning templates

a. Develop templates for common state warning situations.
b. Develop general guidance to assist local governments on development of alert messages that meet CMAS and other limitations and that integrate these alerts with other warning and public information messages

c. Develop standardized public outreach and education training materials on alert and warning.

3.5.2 Current Status

As of October 2009 work had not started on the development of templates for common warning situations.

In August 2008 the Federal Communications Commission (FCC) issued regulations (Code of Federal Regulation, Title 47, Part 10) regarding the Commercial Mobile Alert System (CMAS). Several elements of that regulation may make it challenging to achieve the Report's goal that a common message be transmitted to all systems and devices in the warning area. One element of that regulation (10.430) limits CMAS alert messages to 90 alphanumeric characters in length; another element of the regulation (10.440) prohibits embedding an internet address or telephone number in the message. There is concern that 90 characters may not be enough to give detailed action information, such as evacuation information, and the lack of a contact (such as a website address or hotline phone number) for corroboration may limit the message's usability. CMAS alerts are limited to Presidential Alerts, Imminent Threat Alerts, and Child Abduction/AMBER Alerts.

Cal EMA staff believe that there should be a policy decision on whether all warning messages will conform to the CMAS message structure or if different templates will be developed for different alerting media. They also believe policy direction is needed as to whether California's alert system will be limited to the three CMAS alert situations or if it will be used for a broader range of activities, as the current EDIS is used.

3.5.3 Planned Actions

The following describes current plans for development of alert message templates, once a policy direction has been determined:

- Staff in the California State Warning Center (CSWC) will identify the most common state situations for which alert templates should be developed.
- CSWC will reach out to their counterparts at Operational Area (OA) warning points to determine what their most common alerting scenarios will be, as these are likely to differ from state alerting situations. "Best practices" and sample messages will be collected.
- Invitations will be extended to the academic community to participate with alert system practitioners to develop alert template language.
- Templates will likely need to be developed for message follow-up, such as public information or corroboration resources.

The process used in the evolution of the AMBER Alert system may provide a model for use in this process. This resulted in a general structure that can be locally adapted. It is important that warning messages have a "similar look and feel" statewide, and this could be accomplished through a common general structure. Training on templates and crafting successful warning messages should be addressed in alert and warning training (see item 3.8)

3.6 Minimum Performance Standards for Automated Translation Technology

3.6.1 Description of Proposed Deliverable

The Report included recommendations that alert and warning messages be translated into languages appropriate to the population to be warned and that automatic translation technology should be considered. No standards were identified for effective automatic translation of warning messages.

Deliverable: Develop minimum performance standards for automated translation technology.

3.6.2 Current Status

Cal EMA's Public Information Office currently works with ethnic media and ethnic community-based organizations to ensure access to disaster and emergency alert and warnings.

3.6.3 Planned Actions

For the near future, alert and warning will continue to rely on bilingual persons to effectively translate messages to diverse populations. Cal EMA staff should identify existing standards, if any, that may be applicable to the "manual" translation of warning messages for non-English speaking populations. Successful models or best practices should be publicized to alert and warning system users.

Development of the IPAWS (see item 3.13) may address the issue of automated translation on a national level and California may want to wait and see how this effort evolves. Cal EMA staff believe that automated translation may be able to be addressed in the selection of updated EDIS technology (see item 3.2). Development of standard warning message templates and supporting protocols (see item 3.5) will aid in effective manual and automatic translation.

3.7 Standards for Determining System Accessibility

3.7.1 Description of Proposed Deliverable

As noted in the Report "if California's Statewide Alert and Warning System is designed to take a single message and translate it accurately to multiple methods of communication, this must include translation to communication methods used by people with disabilities." The Report noted a need for standards for evaluation of alert and warning vendor products for accessibility and for guidance on use of registries.

Deliverable: Develop standards to assist local entities in determining whether a system it may potentially procure sufficiently reaches diverse disability and language groups.

3.7.2 Current Status

Cal EMA has developed and published on its website Guidance on Planning and Responding to the Needs of People with Access and Functional Needs. One section of that guidance addresses effective communication during disasters. It provides guidance on early warning notification systems, Emergency Alert System use, evacuation notifications, press conferences,

and websites, documents, and software programs. Included in the section on early warning notifications systems are "business requirements" from a request for proposals issued by Los Angeles County for a mass notification system which should be considered as a model list of requirements for addressing system accessibility for the disability community. The guidance also includes information to assist local governments in involving the disability in their alert and warning system planning.

3.7.3 Planned Actions

It is anticipated that any emergency notification system procured with grant funds administered by Cal EMA will be required to meet the specifications. It is anticipated that this requirement will be implemented with specific grant requirements in Fiscal Year 2011.

3.8 Training

3.8.1 Description of Proposed Deliverable

The Report notes that alert and warning training is needed and should address both creation of the message as well as on the technical use of the system.

Deliverable: Develop alert and warning training.

3.8.2 Current Status

Cal EMA training staff stated that development and offering of the training comes at the end of the alert and warning system development process. Until the system, message templates, guidelines, and other elements are in place, development of a comprehensive training plan cannot begin. However, Cal EMA staff is identifying opportunities to incorporate training on accepted components of the alert and warning system, such as CAP and NOAA weather radio, that can be included in existing emergency management training programs. Existing training programs, such as NOAA/NWS "HAZ Collect" training, are being reviewed and "best practices", such as Contra Costa County warning officer and incident manager checklists, are being collected. Training on the Guidance on Planning and Responding to the Needs of People with Access and Functional Needs (see item 3.7) is in the process of being developed.

3.8.3 Planned Actions

Once the alert and warning program elements are in place, Cal EMA training staff will assist program staff in the development of a training plan and curriculum and in the identification of appropriate training vehicles (such as stand-alone classes, integration in general emergency management training [such as the Emergency Operations Center and Public Information Officer courses taught at the California Specialized Training Institute], on-line courses, etc. as appropriate to audience needs). Cal EMA will work with other training partners, such as NWS, POST, and the State Fire Marshal, on other alert and warning training for first responders. Appropriate elements of training developed by FEMA's Emergency Management Institute on IPAWS should also be incorporated in alert and warning training provided in California. General outreach and encouraging basic familiarity with alert and warning system components could be achieved through presentations at responder association meetings, such as the California Emergency Services Association for emergency managers and similar vehicles for reaching law enforcement, fire and other first responders with an interest in alert

and warning. Training on warning message development should include findings from academic research on the components of successful warnings. Once the training is developed, Cal EMA training staff will submit the curriculum for national approval so Homeland Security funds can be used to support training activities. Part of this training development process will also be identification of the target audience. At this time it is assumed that the training will be for emergency managers, warning center/dispatch center personnel, first responders, and other direct system users.

The Report also recommended public education materials relative to California's alert and warning system should be developed. This would be developed after public information templates have been developed (see item 3.5) and incorporated into ongoing public education campaigns (such as the "Be Smart, Be Responsible, Be Prepared. Get Ready!" campaign).

3.9 Authentication and Identity Management

3.9.1 Description of Proposed Deliverable

The Report noted that authentication and identity management (identification of authorized users) are also important parts of alert and warning system operations. Official authority/role, training, and authentication are all critical elements in system access control.

Deliverable: Develop standards for authentication of those who can originate alerts and warnings.

3.9.2 Current Status

As with training, addressing authentication requirements comes toward the end of system development. Implementation of IPAWS may also contribute to addressing authenication and identity management at a national level. Identity management for ETNS may also be addressed in the NENA or other standards. At this time alert and warning is not one of the focus areas of NIMS personnel credentialing requirements, which would be similar to authentication standards.

3.9.3 Planned Actions

As with liability protections, it has not been clearly demonstrated that there is a need for an authentication or identity management standard beyond what is or may be contained in national norms. If something beyond national standards is needed, a work group involving key local, state, federal, and provider personnel should be convened to identify authentication requirements, including minimum training and documentation. The Alert and Warning governance organization (see item 3.4) would likely be the entity to take on this task.

3.10 System Access

3.10.1 Description of Proposed Deliverable

The Report noted that access to infrastructure critical to operation of components of the alert and warning system can be problematic during emergency operations.

Deliverable: Identify opportunities to develop pre-emergency and emergency coordination between broadcaster, communication, and other industries with critical infrastructure and government to facilitate emergency access to threatened infrastructure.

3.10.2 Current Status

Assuring access to damaged or threatened communications infrastructure (such as radio and television broadcast towers, radio repeaters, and cellular phone towers) in a timely manner during emergency operations has occasionally been a problem. State and local personnel staffing roadblocks or other access control points are often unwilling to allow company technicians access to a closed area to check on or repair critical communications and warning infrastructure.

Generally, these problems have been resolved through coordination between local law enforcement or fire personnel and communication utility/broadcast personnel at the local Emergency Operations Center once specific problems are elevated from the field to that level. At the state level, California Utilities Emergency Association (CUEA) representatives at the State Operations Center or a Regional Emergency Operations Center have been able to address similar issues with state managed access control points. Encouraging participation by communication utility and broadcast personnel in disaster exercises and participation by first responder agencies in Local and State Emergency Communications Committee meetings will help build these pre-disaster relationships and mutual understanding of needs.

3.10.3 Planned Actions

Nevada has recently passed legislation that has declared broadcast personnel to be "first responders" for purposes of accessing broadcast equipment sites. Similar recognition could be considered in California if voluntary coordination methods are not effective. As a last resort, development of a statewide credentialing (or identification card) process could be pursued, although maintenance of such a system would be a sizeable undertaking.

3.11 Guidelines for Emergency Telephone Notification System

3.11.1 Description of Proposed Deliverable

The Report notes that there are no minimum performance standards for emergency notification system vendors operating in California. However, as noted under item 3.7, some performance guidelines for emergency telephone notification system accessibility have since been identified and published on line in Cal EMA's Guidance on Planning and Responding to the Needs of People with Access and Functional Needs.

The National Emergency Number Association (NENA) has published "Minimum Standards for Emergency Telephone Notification Systems" (NENA Standard 56-003). This standard "is intended to provide guidance to the public safety and private sector communities on

operational, administrative and procedural issues – along with general technical considerations - germane to the proper acquisition, implementation and management of an ETNS system."[5]

Deliverable: Working in coordination with the Office of the Chief Information Officer's Public Safety Communications Division, evaluate the National Emergency Number Association (NENA) standards for emergency telephone notification systems (ETNS) and identify lessons learned and best practices from jurisdictions that have implemented local ETNS.

3.11.2 Current Status

The Office of the Chief Information Officer's Public Safety Communications Division (PSCD) oversees operation of the 9-1-1 emergency number program in California. NENA is the national association for 9-1-1 programs. It is appropriate that PSCD take the lead in evaluating and implementing these standards in California. Evaluation of the NENA standard should include the comparison to the accessibility guidance mentioned above and should involve the numerous California jurisdictions that have purchased and used ETNS in local disasters. Lessons learned and best practices regarding their experience with ETNS should be collected and used to evaluate the NENA standard as there is concern that the NENA standard was developed in 2004 and there have been changes in ETNS technology since that time

The Report noted that a telecommunications industry association, the Alliance for Telecommunications Industry Solutions, was also preparing to address emergency notification standards. That effort should be considered as part of the evaluation of the NENA or other appropriate ETNS standard.

3.11.3 Planned Actions

Cal EMA staff will assist PSCD in disseminating best practices and the NENA standard, if appropriate. Adherence to a standard, if validated or adopted by PSCD, should be a requirement for ETNS purchased or upgraded in the future with State funds or grant funds administered by the State.

3.12 Liability Protection for Providers

3.12.1 Description of Proposed Deliverable

As noted in the Report, there is little case law on the topic of alert and warning. Provider representatives on the AWWG expressed a desire to have some level of "Good Samaritan" protection for those issuing or relaying a warning.

Deliverable: Continue to monitor the need for liability protection for providers.

3.12.2 Current Status

There is not a clear case that liability protection is needed as this does not seem to have been an impediment to relaying warnings in California or nationally. Is relaying an alert or warning

[5] The National Emergency Number Association, "Minimum Standards for Emergency Telephone Notification Systems" (NENA Standard 56-003), page 7.

message any greater liability than generally doing business? Does protection from liability remove some impetus for not acting negligently?

3.12.3 Planned Actions

An important first step is to make a clear case that liability protection is required; Cal EMA will continue to monitor the need for state-specific liability protection. Based upon that necessity of liability protection, legislation can be drafted that proposes to provide liability protection for those enterprises that convey warning messages. Bills addressing liability protections have had a rocky history in the Legislature, due to concerns over providing protection that is not needed or providing protection that reduces the protection of consumers. If a bill is to be introduced as an "Administration Bill," (that is a bill sponsored by the Governor), the window for submitting legislative concepts will close before the end of 2009, making action for the upcoming session very difficult. Before a bill is introduced, we must establish the necessity of the bill, gain the agreement of principle stakeholders in the basic outlines of the bill, draft initial bill language, and find a Legislator willing to author the bill.

If providers relaying alerts and warning messages are doing so voluntarily it is possible that the "business and volunteer registry" established pursuant to Assembly Bill 2796 (Government Code 8588.2) could provide some protection. This code section allows Cal EMA to "establish a statewide registry of private businesses and nonprofit organizations that are interested in donating services, goods, labor, equipment, resources, or dispensaries or other facilities" to support public/private partnerships for emergency response.

If legislation addressing liability protection is developed, it could be helpful to look at liability language emergency telephone notification system contracts and contact local agencies that have entered into these agreements to assess any concerns they have had with this element of those agreements. Also, the current statutory liability protection provided for those entities that provide warnings of chemical emergencies in Contra Costa County should be considered.

3.13 Integrated Public Alert and Warning System Implementation and Coordination, including Compliant Emergency Alert System Plan

3.13.1 Description of Proposed Deliverable

As noted in the Report, the Integrated Public Alert and Warning System (IPAWS) is a federally sponsored, integrated public-private initiative to implement a 2006 Presidential Executive Order to “an effective, reliable, integrated, flexible, and comprehensive system to alert and warn the American people.” IPAWS is intended to update the existing EAS system, which relies primarily on broadcast media, as well as integrate other media (such as email, cellular telephones, and other personal devices) in alert and warning. However, as noted in a recent Government Accountability Office (GAO) report (see footnote 4), implementation of IPAWS is behind schedule.

Deliverables: Work with the Federal Emergency Management Agency (FEMA) on development of the Integrated Public Alert and Warning System (IPAWS), including modifications to the Emergency Alert System (EAS).

a. Participate with FEMA to define California’s needs relative to the IPAWS.

b. Partner with IPAWS on further development of the EAS.
c. Follow up on results IPAWS CAP pilot.
d. Coordinate with the Federal Communications Commission (FCC) to determine what is needed to develop an EAS plan compliant with IPAWS and FCC requirements

3.13.2 Current Status

In its response to the GAO report, FEMA noted that an IPAWS Strategic Plan is under development and should be completed in early 2010. It also notes that the EAS update and enhancement, CAP, and CMAS elements of IPAWS continue to be refined through industry and public comment. California participated in an earlier national IPAWS CAP pilot project to test state and federal alert system interoperability (in California's case through EDIS), but results of the pilot project were never published.

The FEMA response to the GAO also notes that there is a "geo-targeted alerting origination capability" prototype that is being tested with state emergency operations centers; according to the FEMA website description of IPAWS, this capability will allow state emergency managers to "quickly and accurately determine the population impacted by the release of a toxic substance or by severe weather." FEMA's response to the GAO indicated it will continue to reach out to stakeholders, including state emergency management partners, to develop and implement IPAWS. This outreach will likely be channeled through the National Emergency Management Association (NEMA). Cal EMA should take advantage of any opportunity to participate in this outreach in order to assure that IPAWS, as it develops, is consistent with California's alert and warning system and the state's needs are taken into account in development of the system (e.g., it is not totally hurricane focused).

3.13.3 Planned Actions

Cal EMA will continue to pursue opportunities for California to be represented in IPAWS development and implementation. As noted under item 3.1, California will communicate its support of CAP to FEMA. In addition to Cal EMA staff, selected representatives from the proposed Alert and Warning Advisory Group will likely be asked to assist with representing California in this important activity.

3.14 Alert and Warning Agreement with Broadcasters Association

3.14.1 Description of Proposed Deliverable

Cooperation of the California Broadcasters Association (CBA) and individual stations are critical to current and future alert and warning strategies, including EAS.
Deliverable: Work with the California Broadcasters Association to develop a formal agreement for Alert and Warning.

3.14.2 Current Status

Cal EMA Office of Public Information and Media Relations will take the lead in developing a memorandum of understanding with the CBA outlining general operating principles. This general agreement should be able to be executed within six months.

3.14.3 Planned Actions

CBA and other EAS stakeholders will also be asked to assist Cal EMA in developing or updating EAS operations protocols that minimize EAS impacts on broadcast operations. CBA and other stakeholders will also be invited to participate in discussions relating to the update of EDIS. Having the National Weather Service as a formal signatory of the CBA memorandum of understanding or other agreement will be explored.

Once completed and executed, the CBA agreement may be used as a template for formalizing working arrangements with other industry groups that are stakeholders in alert and warning operations.

4 Next Steps and Closing Comments

The Plan will be reviewed via webinar by a focus group made up of the statutory members of the AWWG, as identified in the initiating legislation, along with other interested parties from the 2008 meetings. Subsequent to input from the focus group, input on the Plan will be obtained at a public meeting of parties interested in alert and warning. It will then be submitted to the Administration and then to the Legislature along with the Report.

Two key steps have been identified that are critical to the sequencing and development of deliverables identified in the Report Implementation Plan. These include:

- Convene a structured group to formalize stakeholder input into the development of the alert and warning system and to assist with development of specific deliverables.
- Agree on the future of the Emergency Digital Information Service (EDIS), specifically determination of what roles it will play (alert system, information source, etc).

Meanwhile, Cal EMA staff will continue to engage with FEMA on the development of IPAWS and its components, as California remains committed to an alert and warning system that is both fully integrated with the national system but still meets the needs of California's local governments and residents.

ATTACHMENT 1 – Crosswalk of Initiative Deliverables and Recommendations in the Alert and Warning Report to the Legislature

Initiative Deliverables	Recommendations in *Alert and Warning: Report to the California State Legislature*	Comments
3.1 Implementation of Common Alerting Protocol	**6.1 Structuring California's Statewide Alert and Warning System** 1. The Statewide Alert and Warning System must be consistent with the Common Alerting Protocol (CAP) as this is essential in assuring interoperability, ensuring adaptability to new technologies, and creating a "system of systems".	
3.2 New Emergency Digital Information System	**6.1 Structuring California's Statewide Alert and Warning System** 3. California's Emergency Digital information Service (EDIS, or its successor performing similar functions with similar capabilities and characteristics that is current with evolving technology) should be used as the backbone of the Statewide Alert and Warning System including the integration of EDIS into the Alert Aggregator function. 4. The Governor's Office of Emergency Services (OES, as of January 1, 2009 the California Emergency Management Agency) should be given the responsibility and budgetary support necessary to maintain and manage EDIS, including necessary upgrades to maintain consistency with emerging federal alert and warning initiatives. **6.4 Alert and Warning Technology** 1. The Statewide Alert and Warning System must be able to deliver a single message to various recipients through various media. These various media must be virtually equivalent to each other from the message input perspective (i.e., "plug and	

Initiative Deliverables	Recommendations in *Alert and Warning: Report to the California State Legislature*	Comments
	play"). While acknowledging there are technical characteristics and limitations of the various media, the operational processes for the message issuer must not change whether the message is sent to mobile devices, computers, wireline phones, or whatever communications technologies arise in the future. 2. The alert and warning system adopted by the state must be flexible enough to adapt to, not preclude, future changes. System governance must include on-going evaluation and continuous improvement. 3. Similarly, the alert and warning system adopted by the state must be flexible enough to adapt to various alert and warning technologies already in use by local government. 4. The alert and warning system should strive to reach as many landline, wireless, and internet based devices as technically feasible that are in use by humans within a particular area at the particular time the warning is issued, whether wired or wireless and without regard to the area code of the number, and without resulting in significant impacts to the telecommunications infrastructure (i.e., ability to make 9-1-1 calls). ("In use by humans" is meant to exclude those phones/devices assigned to fax machines, ATMs, alarm circuits, etc.) 5. Ability to obtain proprietary information on mobile, VoIP, and other non-landline personal devices may be needed, but must be obtained in such a way as to protect companies and customers against unauthorized system access or use of customer data. This may require federal action. 6. The Statewide Alert and Warning System must incorporate	

Initiative Deliverables	Recommendations in *Alert and Warning: Report to the California State Legislature*	Comments
	redundancy to reach different recipient groups under various emergency scenarios. **6.7 Funding** 1. A secure, dedicated source of funding is required for EDIS and to support the governance system.	
3.3 Alert and Warning System in the State Emergency Plan	**6.1 Structuring California's Statewide Alert and Warning System** 6. The Statewide Alert and Warning System must incorporate redundancy to reach different recipient groups under various emergency scenarios.	
3.4 California Public/Private Partnership for Alert and Warning	**6.1 Structuring California's Alert and Warning System** **2.** California's Statewide Alert and Warning System should be a standardized structure that is implemented locally. The state should maintain the statewide alert and warning system structure. Local agencies should be responsible for maintenance of their systems that tie into the statewide public warning system. **6.2 System Governance and Maintenance** 1. The California Public/Private Partnership for Alert and Warning (Partnership) should be created as the basis of a formal governance structure for the Statewide Alert and Warning System. The objective of the Partnership should be ongoing support of and accountability for a seamless, integrated standards-based public warning capability. Membership must include local and state agencies, representatives of all types of commercial communications	

Initiative Deliverables	Recommendations in *Alert and Warning: Report to the California State Legislature*	Comments
	networks, and disability community representatives.	
3.5 Standard Templates for Common Warning Situations	**6.3 Crafting the Warning Message** 1. Templates should be developed for common warning situations and should be based on academic research on successful warning messages. **2.** Message templates should be crafted or translated to meet the particular needs of California's diverse populations to the extent feasible. **6.10 Public Education** **1.** An effective public education campaign that reaches all communities including our most vulnerable population – including the what, where, when, who, why, and how alerts are issued, the limits of public warning capabilities and appropriate responses to warning messages – should be part of the Statewide Alert and Warning System.	
3.6 Minimum Performance Standards for Automated Translation Technology	**6.3 Crafting the Warning Message** 3. Minimum performance standards for automated translation technology should be defined.	
3.7 Standards for Determining System Accessibility	**6.5 Alert and Warning Accessibility** 2. Agencies procuring local warning systems need to test them for this access through an inclusive process of the diverse disability groups prior to any commitment to purchase vendor products or services. Standards or guidelines should also be developed to assist entities with this assessment.	
3.8 Training	**6.9 Training, Credentialing, and Identity Management**	

Initiative Deliverables	Recommendations in *Alert and Warning: Report to the California State Legislature*	Comments
	1. Standardized alert and warning training tied to and consistent with SEMS and NIMS should be developed. Training needs to address creation of the message as well as use of the system, and should include provisions for periodic refresher training.	
3.9 Authentication	**6.9 Training, Credentialing, and Identity Management** 2. Standards or guidelines should be developed for identification, validation, and credentialing of authorized alert and warning system users (message originators and distributors).	
3.10 System Access	**6.9 Training, Credentialing, and Identity Management** 2. Standards or guidelines should be developed for identification, validation, and credentialing of authorized alert and warning system users (message originators and distributors).	(While not specifically mentioned, deliverable seems to support this recommendation.)
3.11 Standards for Emergency Telephone Notification System	**6.3 Crafting the Warning Message** **3.** Minimum performance standards for automated translation technology should be defined.	
3.12 Liability Protection for Providers	**6.6 Legal/Liability** 1. There is a need for "Good Samaritan" protection for those that issue, relay or provide the network to deliver a legitimate warning. Communications carriers distributing a warning from an authorized government representative to the public in the impact area must be protected from liability. However, liability limitations for all parties issuing and delivering alert	

Initiative Deliverables	Recommendations in *Alert and Warning: Report to the California State Legislature*	Comments
	and warning messages must be balanced with compliance with industry standards.	
3.13 Compliant Emergency Alert System Plan	**6.1 Structuring California's Statewide Alert and Warning System**	(While not specifically mentioned, deliverable seems to support this recommendation.)
3.14 Integrated Public Alert and Warning System Implementation and Coordination	**6.1 Structuring California's Statewide Alert and Warning System**	(While not specifically mentioned, deliverable seems to support this recommendation.)
3.14 Alert and Warning Agreement with Broadcasters Association	**6.2 System Governance and Maintenance** 1. The California Public/Private Partnership for Alert and Warning (Partnership) should be created as the basis of a formal governance structure for the Statewide Alert and Warning System. The objective of the Partnership should be ongoing support of and accountability for a seamless, integrated standards-based public warning capability. Membership must include local and state agencies, representatives of all types of commercial communications networks, and disability community representatives. 2. Common "standards of practice", both for when warnings are issued and how they are issued, should be developed. 3. Procedures and protocols for coordinating and reconciling alerts and warnings that impact multiple local jurisdictions should be developed. **6.6 Legal/Liability**	

Initiative Deliverables	Recommendations in *Alert and Warning: Report to the California State Legislature*	Comments
	1. There is a need for "Good Samaritan" protection for those that issue, relay or provide the network to deliver a legitimate warning. Communications carriers distributing a warning from an authorized government representative to the public in the impact area must be protected from liability. However, liability limitations for all parties issuing and delivering alert and warning messages must be balanced with compliance with industry standards.	

Attachment 2 – Acronyms

AWWG	Alert and Warning Work Group
Cal EMA	California Emergency Management Agency
Cal SIEC	California Statewide Interoperability Executive Committee
CAP	Common Alerting Protocol
CBA	California Broadcasters Association
CHP	California Highway Patrol
CMAS	Cellular Mobile Alert System
CSWC	California State Warning Center
EAS	Emergency Alert System
EDIS	Emergency Digital Information service
ETNS	Emergency Telephone Notification System
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
GAO	Government Accountability Office
IPAWS	Integrated Public Alert and Warning System
JIS	Joint information System
NEMA	National Emergency Management Association
NENA	National Emergency Number Association
NOAA	National Oceanic and Atmospheric Administration
NWS	National Weather Service
OASIS	Organization for the Advancement of Structured Information Standards
POST	Peace Officer Safety and Training
PPW	Partnership for Public Warning
PSCD	Public Safety Communications Division (Chief Technology Office)
SEP	California State Emergency Plan

Attachment 3 – Implementation Plan Development Process

Cal EMA Deliverable Lead Staffmembers:

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3.8 Jim Ayre
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3.10 Richard Osborne
3.11 Richard Osborne
3.12 David Zocchetti
3.13 Michael Crews, Kelly Huston
3.14 Kelly Huston

Alert and Warning Work Group, Stakeholder, and Public Review Opportunities:

October 22, 2009 presentation to State Emergency Communications Committee
November 2, 2009 Webinar
December 14, 2009 Meeting